

CLAIMS

1. A process for the isolation of one or more compound(s) from a microbial biomass which comprises a microorganism that has produced such a compound, the process comprising:

- providing, or obtaining a biomass with a dry matter content of from 25 to 80%;
- granulating the biomass into a granular particles having an average dry matter content of from 25 to 80%;
- drying the granular particles to give dried granules having an average dry matter content of at least 80%; and
- purifying, extracting or isolating the or each compound from the dried granules resulting from (c).

2. A process according to claim 1 or 2 wherein in (b) the granulation is effected by extrusion of the biomass.

3. A process according to claim 2 wherein the biomass is subjected to crumbling or kneading before granulation.

4. A process according to any preceding claim wherein the biomass in (a) is obtained by solid/liquid separation performed on a fermentation broth.

5. A process according to claim 4 wherein the solid/liquid separation is combined with mechanical dewatering.

6. A process according to any preceding claim wherein in (a) the biomass with a dry matter content of 25 to 80% is obtained by:

- the addition of a solid material to the biomass; or
- dewatering of the biomass.

7. A process according to any preceding claim wherein the drying of the granulated biomass in (c) to a dry matter

- 49 -

content of at least 80% is performed by fluidized bed or subfluidized bed drying or vacuum drying.

8. A process according to any preceding claim wherein the biomass comprises, or originates from, a fungus.

5 9. A process according to claim 8 wherein the fungus belongs to the order Mucorales.

10. A process according to claim 9 wherein the fungus belongs to the genus Mortierella.

11. A process according to any one of claims 8 to 10 wherein the fungus is Mortierella alpina.

12. A process according to any one of the claims 1 to 6 wherein the biomass comprises, or originates from, an algae.

13. A process according to claim 12 wherein the algae is a dinoflagellate and/or belongs to the genus Cryptocodinium.

15 14. A process according to any of claims 12 to 13 wherein the algae is Cryptocodinium cohnii.

15. A process according to preceding claim wherein the compound is a polyunsaturated fatty acid (PUFA), optionally contained in a lipid.

20 16. A process according to claim 15, wherein the polyunsaturated fatty acid is a-C18, C20 or C22 w-3 or a C18, C20 or C22 w-6 polyunsaturated fatty acid.

17. A process according to claim 16 wherein the compound is a C20 or C22 w-3 or C20 or C22 w-6 polyunsaturated fatty acid.

25 18. A process according to any preceding claim wherein the compound is arachidonic acid (ARA), eicosapentaenoic acid (EPA) and/or docosahexaenoic acid (DHA).

- 50 -

19. A process according to claim 8 wherein the fungus belongs to the genus *Phycomyces*, *Blakeslea* or *Aspergillus*.

20. A process according to any one of claims 1 to 13 or 19 wherein the compound is a carotenoid or a HMG-CoA reductase inhibitor (e.g. lovastatin, pravastatin or compactin).

21. A process according to any preceding claim wherein the microorganism is a yeast.

22. A process according to claim 21 wherein the compound is tetra-acetyl-phyto-sphingosine (TAPS).

23. A process according to any preceding claim wherein the microorganism is a bacteria.

24. A process according to claim 23 wherein the compound is a vitamin.

15 25. A process according to an preceding claim wherein the biomass is obtained from a fermentation broth after acidification (such as to a pH <5).

26. A process according to claim 25 wherein acidification (e.g. to a pH of about 2) results in 20 precipitation of the compound.

27. A microbial extrudate which comprises, or is obtained from, a fungus. ✓

28. An extrudate according to claim 27 wherein the fungus is of the genus *Marticrella*.

25 29. A composition comprising granular particles of biomass, the particles having an average dry matter content of at least 30% but less than 70% and having been obtained by granulating biomass. ✓

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Sub. a)
Sub. a)*

51 -

30. A composition which comprises dried granules, the granules being derived from a microbial biomass and dried, and having an average dry matter content of at least 80%.

31. A composition according to claim 30 or 31 wherein 5 the granular particles or dried granules are formed by extrusion.

32. A composition according to any one of claims 29 to 31 wherein the biomass comprises a fungus.

33. A composition according to any one of claims 29 to 10 32 wherein the granular particles have a diameter of from 0.3 to 10mm and their length is, on average, 2 to 6 times that of the diameter of the granule.

34. The use of a compound isolated, extracted or purified by a process according to any of claims 1 to 26 for 15 the preparation of a food composition, nutritional supplement, cosmetic and/or pharmaceutical composition.

35. The use according to claim 34 wherein the food composition comprises an infant formula.

36. A process for the isolation of one or more 20 compound(s) from granules of biomass, the process comprising:

- a) providing dried granules having a dry matter content of at least 80%, the granules having been derived from a microbial biomass comprising microorganisms that have produced such a compound; and
- 25 b) extracting or isolating the or each compound from the dried granules by solvent extraction.

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74